

Notice of Allowability

Application No.

10/041,883

Examiner

Philip B. Tran

Applicant(s)

CARLSON ET AL.

Art Unit

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 04/25/2006.
2. ☒ The allowed claim(s) is/are 1-10, 12-15, 17-28, 30-33, 35-46, 48-51, 53 and 54.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 11/14/2005
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 05/12/06
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Philip Tran
PRIMARY EXAMINER

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. Authorization for this examiner's amendment was given in a telephone interview with Mr. Kudirka (Reg. No. 26,931), the undersigned, on May 11, 2006 and May 12, 2006.

The application has been amended as follows:

IN THE CLAIMS:

Amend claim 1 as follows:

1. (Currently Amended) A method for configuring multiple resources in a system, including a host adaptor, a switch and a storage device, the method comprising:

providing a plurality of elements capable of configuring resources in the system, wherein each element specifies configuration parameters to use to configure instances of the resource, and wherein each resource is capable of being configured by multiple elements, each of which provides a different configuration of the resource;

maintaining service information for each element indicating at least one service attribute that results from the configuration of a resource by that element;

receiving at least one administrator specified service attribute for a configuration, the administrator specified service attribute including a first availability option, a second availability option, and a third availability option, wherein the first availability option does

not define any data and hardware redundancy, wherein the second availability option defines data redundant for a configured storage device, and wherein the third availability option defines data redundancy of a configured storage device and redundancy of at least one other switch or host adaptor component;

comparing the administrator specified service attribute to the service information to determine at least one element and resource configured thereby for which the service information indicates a service attribute that matches the at least one administrator specified service attribute; and

and

using the determined elements to configure resource instances indicated in the service information to implement the specified service attributes.

Amend claim 15 as follows:

15. (Currently Amended) A method for configuring storage resources in a system including a host adaptor, a switch and a storage device, the method comprising:

providing a plurality of storage elements capable of configuring the storage resources in the system, wherein each storage element specifies configuration parameters to use to configure the storage resource, and wherein each storage resource is capable of being configured by multiple storage elements, each of which provides a different configuration of the storage resource;

maintaining service information for each storage element indicating at least one storage attribute resulting from the configuration of a resource by the element;

receiving at least one administrator specified service attribute for the configuration of the storage resource, the administrator specified service attribute including a first availability option, a second availability option, and a third availability option, wherein the first availability option does not define any data and hardware redundancy, wherein the second availability option defines data redundancy for a configured storage device, and wherein the third availability option defines data redundancy of a configured storage device and redundancy of at least one other switch or host adaptor component;

comparing the administrator specified service attribute to the service information to determine one storage element and storage resource configured thereby for which the service information indicates a service attribute that matches the administrator specified service attribute; and

and

using the determined storage element to configure the storage resources indicated in the service information to implement the specified service attributes.

Amend claim 19 as follows:

19. (Currently Amended) A system for configuring multiple resources, comprising:

a plurality of configurable resources, including a host adaptor, a switch and a storage device;

means for providing a plurality of elements capable of configuring the resources in the system, wherein each element specifies configuration parameters to use to configure instances of the resource, and wherein each resource is capable of being configured by multiple elements each of which provides a different configuration of the resource;

means for maintaining service information for each element indicating at least one service attribute that results from the configuration of the a resource by that element;

means for receiving at least one administrator specified service attribute for a configuration, the administrator specified service attribute including a first availability option, a second availability option, and a third availability option, wherein the first availability option does not define any data and hardware redundancy, wherein the second availability option defines data redundancy for a configured storage device, and wherein the third availability option defines data redundancy of a configured storage device and redundancy of at least one other switch or host adaptor component;

means for comparing the administrator specified service attribute to the service information to determine at least one element and resource configured thereby for which the service information indicates a service attribute that matches the at least one administrator specified service attribute; and

and

means for using the determined elements to configure resource instances indicated in the service information to implement the specified service attributes.

Amend claim 33 as follows:

33. (Currently Amended) A system for configuring storage resources in a system, comprising:

storage resources including a host adaptor, a switch and a storage device;

means for providing a plurality of storage elements capable of configuring the storage resources in the system, wherein each storage element specifies configuration parameters to use to configure the storage resource, and wherein each storage resource is capable of being configured by multiple storage elements, each of which provides a different configuration of the storage resource;

means for maintaining service information for each element indicating at least one storage attribute resulting from the configuration of a storage resource by that element;

means for receiving at least one administrator specified service attribute for the configuration of the storage resource, the administrator specified service attribute including a first availability option, a second availability option, and a third availability option, wherein the first availability option does not define any data and hardware redundancy, wherein the second availability option defines data redundancy for a configured storage device, and wherein the third availability option defines data redundancy of a configured storage device and redundancy of at least one other switch or host adaptor component;

means for comparing the administrator specified service attribute to the service information to determine one storage element and storage resource configured thereby for which the service information indicates at least one service attribute that matches the administrator specified service attribute; **and**

and

means for using the determined storage element to configure the storage resources indicated in the service information to implement the specified service attributes.

Amend claim 37 as follows:

37. (Currently amended) An article of manufacture including code **embodied in a computer readable storage medium** for configuring multiple resources in a system, including a host adaptor, a switch and a storage device, wherein the code causes operations comprising:

providing a plurality of elements capable of configuring resources in the system, wherein each element specifies configuration parameters to use to configure instances of the resource, and wherein each resource is capable of being configured by multiple elements, each of which provides a different configuration of the resource;

maintaining service information for each element indicating at least one service attribute that results from the configuration of a resource by that element;

receiving at least one administrator specified service attribute for a configuration, the administrator specified service attribute including a first availability option, a second

availability option, and a third availability option, wherein the first availability option does not define any data and hardware redundancy, wherein the second availability option defines data redundancy for a configured storage device, and wherein the third availability option defines data redundancy of a configured storage device and redundant of at least one other switch or host adaptor component;

comparing the administrator specified service attribute to the service information to determine at least one element and resource configured thereby for which the service information indicates a service attribute that matches the at ~~matches~~ least one administrator specified service attribute; and

~~and~~

using the determined elements to configure resource instances indicated in the service information to implement the specified service attributes.

Amend claim 51 as follows:

51. (Currently amended) An article of manufacture including code embodied in a computer readable storage medium for configuring storage resources in a system, including a host adaptor, a switch and a storage device, wherein the code causes operations comprising:

providing a plurality of storage elements capable of configuring the storage resources in the system, wherein each storage element specifies configuration parameters to use to configure the storage resource, and wherein each storage

resource is capable of being configured by multiple storage elements, each of which provides a different configuration of the storage resource;

maintaining service information for each storage element indicating at least one storage attribute resulting from the configuration of a storage resource by that element;

receiving at least one administrator specified service attribute for the configuration of the storage resource, the administrator specified service attribute including a first availability option, a second availability option, and a third availability option, wherein the first availability option does not define any data and hardware redundancy, wherein the second availability option defines data redundancy for a configured storage device, and wherein the third availability option defines data redundancy of a configured storage device and redundancy of at least one other switch or host adaptor component;

comparing the administrator specified service attribute to the service information to determine one storage element and storage resource configured thereby for which the service information indicates at least one service attribute that matches the administrator specified service attribute; and

and

using the determined storage element to configure storage resources indicated in the service information to implement the specified service attributes.

REASONS FOR ALLOWANCE

3. Claims 1-10, 12-15, 17-28, 30-33, 35-46, 48-51 and 53-54 are allowable over the prior art of record.

4. This communication warrants no examiner's reason for allowance, as applicant's reply makes evident the reason for allowance, satisfying the record as whole as required by rule 37 CFR 1.104 (e). In this case, the substance of applicant's remarks in the Amendment filed on 11 January 2006 with respect to the amended claim limitations and further amended claim limitations in the Amendment filed on 25 April 2006 point out the reason claims are patentable over the prior art of record. Thus, the reason for allowance is in all probability evident from the record and no statement for examiner's reason for allowance is necessary (see MPEP 13202.14).

5. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip B. Tran whose telephone number is (571) 272-3991. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

7. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Philip B. Tran
Primary Examiner
Art Unit 2155
May 12, 2006